PENTAX

PENTAX PEOTO: Browser™ 2.0 **PENTAX PEOTO:** Laboratory™ 2.0

Operation Manual



Thank you for purchasing the PENTAX Digital Camera.

This is the manual for "PENTAX PHOTO Browser 2.0" and "PENTAX PHOTO Laboratory 2.0", software for your Windows PC or Macintosh for enjoying images created with your camera. Please read the separate camera operating manual and this manual before using your camera, "PENTAX PHOTO Browser 2.0", or "PENTAX PHOTO Laboratory 2.0", in order to get the most out of all the features and functions.

Keep the camera operating manual and this manual safe, as they can be valuable tools in clarifying and helping you to understand all the camera's capabilities.

Regarding copyrights

Images taken using this camera that are for anything other than personal enjoyment cannot be used without permission according to the rights as specified in the Copyright Act. Please take care, as there are even cases where limitations are placed on taking pictures even for personal enjoyment during demonstrations, industrial enterprise or as items for display. Images taken with the purpose of obtaining copyrights also cannot be used outside the scope of use of the copyright as laid out in the Copyright Act, and care should be taken here also.

Regarding trademarks

- PENTAX and smc PENTAX are trademarks of PENTAX Corporation.
- PENTAX PHOTO Browser, PENTAX PHOTO Laboratory, PENTAX REMOTE Assistant are trademarks of PENTAX Corporation.
- The SD logo

 is a trademark.
- All other brands or product names are trademarks or registered trademarks of their respective companies.

Regarding PictBridge

PictBridge allows the user to connect the printer and digital camera directly, using the unified standard for the direct printout of images. You can print images directly from the camera through a few simple operations.

Disclaimer

- PENTAX is not responsible for any damages resulting from the direct or indirect use
 of this software or repercussive damages, damage to data, programs or other
 intangible property, loss of profit or anticipated profit, or dispute with a third party
 resulting from the use of this software.
- The specifications of this software are subject to change without notice.
- Symbols used in this manual have the following meanings:

memo	Gives information that is useful to know.
Caution	Gives cautions and notes about the operation.

The screen pictures shown in this manual may differ depending on the type of computer used.

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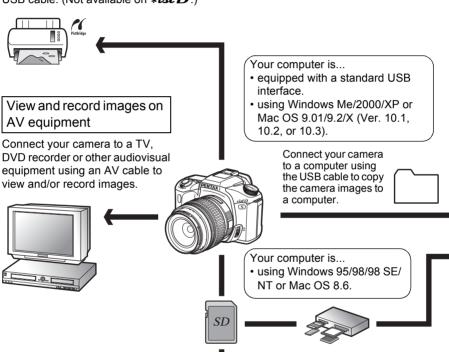
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Enjoying Your Digital Camera Pictures

You can use a computer to organize and edit the pictures captured with your digital camera.

Direct Print

Connect your camera directly to a PictBridge-compatible printer using the USB cable. (Not available on *ixtD.)



Use your photo shop

You can have prints made from images recorded on your card at a photo shop.

- Set DPOF settings on your camera, and get prints from your photo shop.
- Select the images for prints.

You can transfer your images using a built-in card slot + PC card adapter or a card reader.

 Remove the card from the camera. When transferring images on the card to a computer with another device, make sure to review the user manual accompanying that device.

Use your image data

You can use your e-mail software to attach and send images by e-mail, or post the images on your website.



- See the operating manual of your e-mail software for details on how to make attachments to e-mails
- See the operating manual of the software you are using for details on how to use images and movies on your website.



PENTAX PHOTO Browser 2.0 (p.22 - p.74) PENTAX PHOTO Laboratory 2.0 (p.76 - p.97)

- View images
 Organize and save images
- Print images
 Rename all
- Save all image data
- PENTAX-specification RAW data processing

Use a commercially-available image editing software to perform resizing, trimming and other image editing operations.

Use your printer



You can use your printer to print images transferred to your computer.

Some printers can print directly from memory cards.

 For details, see the operating manual of the printer you are using.



Save your image data

Images transferred to the computer can be saved onto a CD-R or other media.

What You Can Do with PENTAX PHOTO Browser 2.0

PENTAX PHOTO Browser 2.0 is software for viewing, printing and managing images taken on your digital camera and saved on your computer.

When you select a folder containing saved images, those images compatible with PENTAX PHOTO Browser 2.0 automatically appear as thumbnails. You can select a thumbnail image to view the image at a larger size.

Files with extensions .bmp (BMP), .jpg (JPEG), .pef (RAW), .pct (PICT), .png (PNG) and .tif (TIFF) are supported.



This manual describes PENTAX PHOTO Browser 2.0 and PENTAX PHOTO Laboratory 2.0 with screen images from Windows XP.

The operation of these software applications is nearly the same on Macintosh with the exception of some keys. For information on Macintosh-specific instructions, see the sections labeled "For Macintosh" or the online help.

Software Provided

The provided CD-ROM (S-SW28) contains the following software:

- PENTAX PHOTO Browser 2.0
- PENTAX PHOTO Laboratory 2.0

PENTAX PHOTO Browser 2.0

PENTAX PHOTO Browser 2.0 can perform the following tasks:

- Save image files under the same or a new name, change file names and file types, copy, cut, paste, rotate and delete.
- Create new folders, change folder names, copy, cut, delete and paste.
- Save image data list.
- · Check image data.
- · View RAW image data easily.
- · Print images.

You can also start RAW image data editing software PENTAX PHOTO Laboratory 2.0 and PENTAX REMOTE Assistant*1 from within PENTAX PHOTO Browser 2.0.

*1: PENTAX REMOTE Assistant can only be used together with *istD.

PENTAX PHOTO Laboratory 2.0

Performs color separation processing and other processing on CCD RAW image data recorded in PENTAX digital camera dedicated format, thereby enabling images to be saved so as to appear on commercially-available image viewing and editing software.

PENTAX PHOTO Laboratory 2.0 can also be run as a standalone application.

System Requirements

We recommend the following system requirements to transfer images from your camera to a computer and to install and use PENTAX PHOTO Browser 2.0 and PENTAX PHOTO Laboratory 2.0.

Windows System Requirements

USB Connection

- Computer with Windows Me/2000/XP (Home Edition/Professional) preinstalled.
- · USB port must be standard equipment.

Application Software

<PENTAX PHOTO Browser 2.0 and PENTAX PHOTO Laboratory 2.0> (9 languages: English, French, German, Spanish, Italian, Russian, Chinese [traditional and simplified], Korean, Japanese)

• OS : Windows Me/2000

Windows XP (Home Edition/Professional)

CPU : PentiumIII or later (Pentium 4 or later recommended)
 Memory : 256MB minimum (512MB or higher recommended)

Monitor : 1024×768 (1280×1024 or better resolution

recommended) in 24 bit full color (approx. 16.77

million colors)

• Free Disk Space : 250MB or more (500MB or more recommended)



- In Windows 95/98/NT, you cannot transfer files using the USB cable.
- We recommend using AC adapter when the camera is connected to the computer. If the batteries become depleted during image transfer, the image data or SD Memory Card may be damaged.

Macintosh System Requirements

USB Connection

- Macintosh with Mac OS 9.01/9.2/X (Ver. 10.1, 10.2 or 10.3) preinstalled.
- · USB port must be standard equipment.
- * Installation of the USB driver is not necessary.

Application Software

<PENTAX PHOTO Browser 2.0 and PENTAX PHOTO Laboratory 2.0> (9 languages: English, French, German, Spanish, Italian, Russian, Chinese [traditional and simplified], Korean, Japanese)

• OS : Mac OS 9.0 or higher (CarbonLib 1.5 or later)

Mac OS X 10.1.3 or later

• CPU : PowerPC G3 or later (G4 1.0 GHz or higher

recommended)

• Memory : 256MB minimum (512MB or higher recommended)

Monitor : 1024×768 (1280×1024 or better resolution

recommended) in 24 bit full color (approx. 16.77

million colors)

Free Disk Space : 250MB or more (500MB or more recommended)



- We recommend using AC adapter (sold separately) when the camera is connected to the computer. If the batteries become depleted during image transfer, the image data or SD Memory Card may be damaged.
- In Mac OS 8.6, you cannot transfer files using the USB cable.

Installing the Software

Here is the procedure for installing PENTAX PHOTO Browser 2.0 and PENTAX PHOTO Laboratory 2.0.

PENTAX PHOTO Browser 2.0 and PENTAX PHOTO Laboratory 2.0 can be installed on top of earlier versions of this software supplied with *ixtD.

When multiple accounts have been setup in Windows 2000/XP or Mac OS X, log on with an account that has administrative rights before installing the software.

When Using Windows

1 Turn your computer on.

Close any other software that is open.

Place the provided CD-ROM (S-SW28) into the CD-ROM drive on your computer.

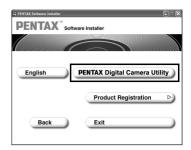
The PENTAX Software Installer screen appears.

- If the PENTAX Software Installer screen does not appear
 Display the PENTAX Software Installer screen following the steps below.
 - 1) Double-click [My Computer] from the start menu.
 - 2) Double-click the [CD-ROM drive (S-SW28)] icon.
 - 3) Double-click [Setup.exe].
- You can choose the languages from the displayed screen.

The software selection screen appears.



Click [PENTAX Digital Camera Utility].



Select your applicable language in the Select Language screen and click [OK].





Some operating environments select the language automatically. Continue with the installation in step 6. The installer starts.





Confirm the folder name in the Destination Folder to which the program files are to be installed. Click [Next] if no need to change.



Click [Next] to begin the installation.

Copying of the program files begins.



A message appears after installation of the software is finished. Click [Finish] to exit the installation program.

The installation is complete.



Product Registration on the Internet

Please click [Product Registration] on the software selection screen in step **4** (p.8). A world map for Internet Product Registration is displayed.

If your PC is connected to the Internet, click the displayed country or region and then follow the instructions to register your product.



Thank you very much for your cooperation.



Only customers in displayed countries and regions can register their products on the Internet Product Registration.

When Using Macintosh

Turn your Macintosh on.

Close any other software that is open.

- Place the provided CD-ROM (S-SW28) into the CD-ROM drive on your Macintosh.
- Double-click the CD-ROM (S-SW28) icon.

The contents of the CD-ROM are displayed.



Double-click the [PENTAX Installer] icon.

The PENTAX Software Installer screen appears.



You can choose the languages from the displayed screen.

The software selection screen appears.



Click [PENTAX Digital Camera Utility].



The installation starts.



The message [Installation was successful....] appears. Click [Quit].



Product Registration on the Internet

Please click [Product Registration] on the software selection screen in step **6** (p.12). A world map for Internet Product Registration is displayed.

If your Macintosh is connected to the Internet, click the displayed country or region and then follow the instructions to register your product.



Thank you very much for your cooperation.



Only customers in displayed countries and regions can register their products on the Internet Product Registration.

Saving Images on Your Computer

Here is the procedure for saving images captured with your digital camera onto your computer.

This section describes the method for saving images by connecting your camera and computer with the USB cable, as well as other methods.

Saving Images by Connecting Your Camera and PC (For Windows)

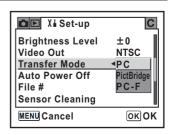
Set [Transfer Mode] on the Camera to [PC]

*istDS is used as an example here. When using *istD, [Transfer Mode] does not need to be set. Go to "Connecting Your Camera to Your PC".

- 1 Press the MENU button on the camera.
 - The [♠ Rec. Mode] menu or the [▶ Playback] menu appears.
- Press the four-way controller (►) to display the [X set-up] menu.
- 3 Use the four-way controller (▲ ▼) to select [Transfer Mode].
- Press the four-way controller (►).

A pull-down menu appears.

Use the four-way controller (▲ ▼) to select [PC].



6

Press the OK button on the camera.



- Do not connect the camera to your computer while [PictBridge] is selected for the [Transfer Mode].
- If the USB transmission speed of the computer is slower than that of the camera, an error may occur when transferring data. If this occurs, set the Transfer Mode to [PC-F]. This sets the transfer speed to the USB 1.1 data transfer rate, thereby reducing the possibility of an error.

Connecting Your Camera to Your PC

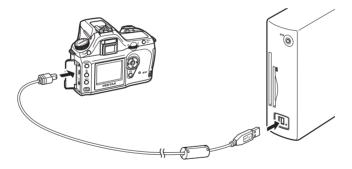
1 Turn

Turn your PC on.

2

Turn off your camera and use the USB cable to connect your camera and your PC.

Confirm that an SD Memory Card is inserted into your camera.



3

Turn your camera on.

The camera is recognized as a [Removable Disk] in [My Computer].



- If the [Removable Disk Drive] dialog appears in Windows XP, select [Open folder to view files using Windows Explorer] and click [OK]. The window in step 3 on p.15 appears.
- When using Windows XP, if the SD Memory Card has a volume label, the content of the volume label name appears instead of [Removable Disk]. A new unformatted SD Memory Card may show the manufacturer name or model number.

Saving Camera Images on Your PC

Windows XP is used as an example here.

Click [My Computer] from the start menu.



Double-click the [Removable Disk] icon.



3 Double-click the [DCIM] icon.

The [XXXPENTX] (XXX is a three-digit number) folder appears.

The camera image files are in this folder.



Drag and drop the [XXXPENTX] folder into any desired folder, such as the desktop or the [My Documents] folder.

The camera images are saved on your PC as an entire folder.

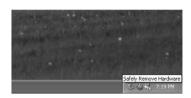


Disconnecting Your Camera from Your PC

Windows XP

Double-click the [Safely Remove Hardware] icon in the task bar.

The [Safely Remove Hardware] screen appears.



Confirm that [USB Mass Storage Device] is selected and then click [Stop].

The [Stop a Hardware device] screen appears.



Select [USB Mass Storage Device] and click [OK].

A message appears indicating that the hardware can be safely removed.



- 4 Click [OK].
- Turn off the camera and disconnect the USB cable from your camera and PC.



Double-click the [Unplug or Eject Hardware] icon in the task bar.

The [Unplug or Eject Hardware] screen appears.



Confirm that [USB Mass Storage Device] is selected and then click [Stop].

The [Stop a Hardware device] screen appears.



Select [USB Mass Storage Device] and click [OK].

A message appears indicating that the hardware can be safely removed.



4 Click [OK].



Turn off the camera and disconnect the USB cable from your camera and PC.



The USB mass storage device will not stop when the files stored on the removable disk are in use for applications.

Saving Images by Connecting Your Camera and Macintosh (For Macintosh)

Setting the USB Connection Mode to [PC]

*istDs is used as an example here. When using *istD, [Transfer Mode] does not need to be set. Go to "Connecting the Camera and Macintosh" (p.19).

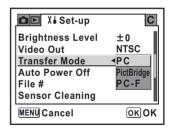
Press the MENU button on the camera.

The [♠ Rec. Mode] menu or the [▶ Playback] menu appears.

- Press the four-way controller (►) to display the [X set-up] menu.
- **3** Use the four-way controller (▲ ▼) to select [Transfer Mode].
- 4 Press the four-way controller (►).

A pull-down menu appears.

Use the four-way controller(▲ ▼) to select [PC].



b Press the OK button on the camera.



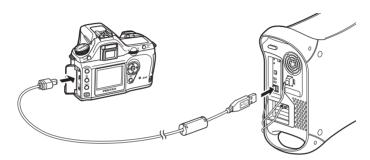
- Do not connect the camera to your computer while [PictBridge] is selected for the [Transfer Mode].
- If the USB transmission speed of the computer is slower than that of the camera, an error may occur when transferring data. If this occurs, set the Transfer Mode to [PC-F]. This sets the transfer speed to the USB 1.1 data transfer rate, thereby reducing the possibility of an error.

Connecting the Camera and Macintosh

7 Turn on your Macintosh.

Turn off your camera and use the USB cable to connect your camera and your Macintosh.

Confirm that an SD Memory Card is inserted into your camera.



Turn your camera on.

Your camera is recognized on the desktop as [NO_NAME (or the volume label of the SD Memory Card if one is registered)].

You can change the folder name.

When the iPHOTO screen appears, close it.



For Mac OS 9.0, it is recognized as [Untitled (or the volume label of the SD Memory Card if one is registered)].

Saving Camera Images on Your Macintosh

Mac OS X (Ver. 10.2) is used as an example here.

Double-click the [NO_NAME] icon on the desktop.



Double-click the [DCIM] icon.

The [XXXPENTX] (XXX is a three-digit number) folder appears.



The camera image files are in this folder.



Double-click the [Macintosh HD] icon on the desktop.

This opens the [Macintosh HD] folder.



Drag and drop the [XXXPENTX] folder into any desired folder, such as the [Macintosh HD] folder.

The camera images are saved into the [Macintosh HD] folder as an entire folder.



Disconnecting Your Camera from Your Macintosh

Drag [NO_NAME (or the volume label name on the SD Memory Card)] on the desktop to the trash can.



Turn off the camera and disconnect the USB cable from your camera and Macintosh.

Other Methods for Saving Images

Use a card reader or card adapter to send image files directly to your computer from a memory card with saved images without connecting your camera and your computer with a USB cable.

For details, please refer to the user's manual for your computer or card reader.

This section describes opening and closing PENTAX PHOTO Browser 2.0 and viewing the PENTAX PHOTO Browser 2.0 window, and explains its functions.

Opening PENTAX PHOTO Browser 2.0

For Windows

- 1 Select the start menu on the desktop.
- Select [PENTAX PHOTO Browser] from [PENTAX Digital Camera Utility] in the program menu.

PENTAX PHOTO Browser 2.0 is opened and the PENTAX PHOTO Browser 2.0 window appears.



● Closing PENTAX PHOTO Browser 2.0

Select [Exit] from the [File] menu.

For Macintosh

- Double-click the [PENTAX Digital Camera Utility] folder in [Applications] on the hard disk.
- Double-click the [PENTAX PHOTO Browser] program icon.

PENTAX PHOTO Browser 2.0 is opened and the PENTAX PHOTO Browser 2.0 window appears.



• Closing PENTAX PHOTO Browser 2.0

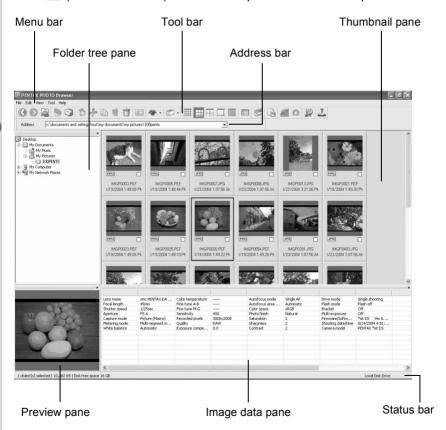
Select [Quit PENTAX PHOTO Browser] in [PENTAX PHOTO Browser] on the desktop menu bar.

About the PENTAX PHOTO Browser 2.0 Window

This section explains the PENTAX PHOTO Browser 2.0 window layout, names and functions.

Each pane can be resized from side to side and up and down. Drag or double-click the Address bar, Folder tree pane, Image data pane or Preview pane to remove it from the browser window and move it to a different position. Alternatively, click on the top right of each pane to close that pane. (For Macintosh, click a pane or drag the margin to remove the pane.)

Click (Default Position) to return the pane to the default position.



Address bar

The address of the currently displayed folder appears here. Double-click the address bar to remove it from the browser window and move it to a different position. (For Macintosh, click the Address bar or drag the margin to remove the Address bar.)

• Folder tree pane

Internal data on your computer appears here as a folder tree. Select the folder containing saved image files here.

Also, the Folder tree pane handles operations such as creating new folders, deleting folders and moving/copying folders.

Double-click or drag the top bar to remove the Folder tree pane from the browser window and move it to a different position. (For Macintosh, click the Folder tree pane or drag the margin to remove the pane.)

• Thumbnail pane

Files in the folder selected in the Folder tree pane appear here. Select from five file display methods. When a thumbnail image is selected in the Thumbnail pane, the image appears in the Preview pane and the image data appears in the Image data pane.

Preview pane

An image selected in the Thumbnail pane appears in this pane. Double-click the top bar to remove the Preview pane from the browser window and move it to a different position. (For Macintosh, click the Preview pane or drag the margin to remove the pane.)

• Image data pane

The image data for the image selected in the Thumbnail pane appears here. Double-click the top bar to remove the Image data pane from the browser window and move it to a different position. (For Macintosh, click the Image data pane or drag the margin to remove the pane.)

Place the cursor over a cell dividing line at the top of the pane and drag it to resize the cell. (For Macintosh, drag at the desired position to resize the cell.)

The following items appear:

Data	Contents	Example
Lens name	Shows lens type	smc PENTAX- FA 50mm F1.4
Focal length	Focal length when shooting (in mm)	50mm
Shutter speed	Shutter speed when shooting (in seconds)	1/250sec
Aperture	Aperture value when shooting	F8.0

Data	Contents	Example
Capture mode	Capture mode when shooting	Auto Picture
		(Normal)
Metering mode	Metering mode when shooting	Multi-segment
		metering
White balance	White balance mode	Automatic
Color temperature	Color temperature (units: Kelvin) *1	
Fine tune A-B	Amber - Blue fine tune *1	
Fine tune M-G	Magenta - Green fine tune *1	
Sensitivity	ISO sensitivity when shooting	200
Recorded pixels	Number of recorded pixels	3008×2000
Quality	Recording quality	Better
Exposure	Exposure compensation	0.0
compensation		
Autofocus mode	Autofocus mode when shooting	Single AF
Autofocus area mode	Autofocus area mode when shooting	Automatic
Color space	Color space mode	sRGB
Photo finish	Photo finish settings	Bright
Saturation	Saturation settings	0
Sharpness	Sharpness settings	0
Contrast	Contrast settings	0
Drive mode	Drive mode settings when shooting	Single shooting
Flash mode	Flash mode settings when shooting	Flash off
Bracket	Bracket settings when shooting	Off
Multi-exposure	Multi-exposure settings when shooting	Off
Firmware/Software	Version of the software when images	*ist DS Ver. 1.00
version	were last saved *2	
Shooting date/time	Date and time shot	2004/11/01
		10:00:00
Camera model	Camera model	PENTAX *ist DS

^{*1:} Processing details when using PENTAX PHOTO Laboratory 2.0 appear.

Status bar

The status of PENTAX PHOTO Browser 2.0 appears.

The following items appear:

- Number of objects in the selected folder, total folder size (not including subfolders) or number of selected objects and total size
- · Available disk space for selected drive
- · Progress status when loading thumbnails
- · Identification of local disk, removable disk and network

^{*2:} Information on the camera's firmware appears for captured images.

Menu Bar

This executes functions or sets various settings of PENTAX PHOTO Browser 2.0.

For Macintosh, the menu bar appears at the top of the desktop.

File menu	
Create New Folder	This creates a new folder in the location specified on the Folder tree pane. (p.73)
Open	This opens the selected folder. For an image selected in the Thumbnail pane, it displays the image in a new main image window.
Rename	This changes the name of the selected file or folder. (p.71)
Rename All	This changes the names of all selected files. (p.72)
Page Setup	This sets printing options such as margins, headers/footers, and number of copies. (p.57)
Print	This prints the selected image file. (p.52)
Properties	The properties of the selected file or folder appear. (p.74)
Exit	This closes PENTAX PHOTO Browser 2.0. (For Macintosh, select [Quit PENTAX PHOTO Browser].)

Edit menu	
Undo	This undoes the previous file operation.
Cut	This prepares the selected file or folder to be moved to a different location. (p.67)
Сору	This copies the selected file or folder. (p.67)
Paste	This copies the cut or copied file or folder into the selected folder. (p.67)
Delete	This deletes the selected folder or image. When a folder is deleted, all files in the folder are also deleted. (p.70)
Check Selected Image	This checks the selected file.
Uncheck Selected Image	This unchecks the selected file.
Uncheck All	This unchecks all images.
Select All	This selects all files within the currently open folder.
Invert Selection	This unselects all selected files and selects all unselected files within the currently open folder.

View menu	
Tool Bar	This shows or hides the Tool bar.
Folder Tree	This shows or hides the Folder tree pane.
Preview	This shows or hides the Preview pane.
Address Bar	This shows or hides the Address bar.
Status Bar	This shows or hides the Status bar.
Image Data	This shows or hides the Image data pane.
Default Position	This returns each pane to its default position.
Filter	This sets the type of file that appears in the Thumbnail pane. Uncheck the items you want to hide. Select from the following four items: PENTAX Image: Images captured with your PENTAX camera
	Other Image : Images other than those captured with your PENTAX camera (JPEG, TIFF, BMP, PNG, PICT)
	Folder : Folders Other : Files not compatible with PENTAX PHOTO Browser 2.0
Sort by	This specifies the order in which objects appear in the Thumbnail pane and specifies ascending or descending order. You can select from File Name, File Size, File Date/Time, File Type, Shooting Date/Time, Image Size and Lens Name.
Thumbnail Caption	This sets the captions of objects that appear in the Thumbnail pane. File Name, File Date and File Time appear by default.
Thumbnail (Smallest)	The smallest size thumbnail appears in the Thumbnail pane.
Thumbnail (Small)	A small size thumbnail appears in the Thumbnail pane.
Thumbnail (Medium)	A medium size thumbnail appears in the Thumbnail pane.
Thumbnail (Large)	A large size thumbnail appears in the Thumbnail pane.
Details	Image details appear in the Thumbnail pane without an image.
Move	Select [Back] to return to the previously opened folder, [Forward] to move forward one folder, and [Up] to move up one folder in the directory tree.
Slideshow	Selected or checked images appear in order. (p.49)

Tool menu	
Save Image Data List	Use the check boxes to save the image data from multiple folders into one CSV format file. If no images are selected or checked, all the image data in the current folder is saved. (p.48)
PENTAX PHOTO Laboratory	This starts PENTAX PHOTO Laboratory 2.0. Specify the applicable image files within the Thumbnail pane of PENTAX PHOTO Browser 2.0. (p.76)
PENTAX REMOTE Assistant*1	This starts PENTAX REMOTE Assistant. PENTAX REMOTE Assistant can be used by installing it in the same folder as PENTAX PHOTO Browser 2.0 and using it together with *istD.
Options	This sets various settings for PENTAX PHOTO Browser 2.0. (p.60)

Help menu	
Help Topics	This shows PENTAX PHOTO Browser 2.0 help contents.
Index	This shows PENTAX PHOTO Browser 2.0 help index search. (This command is not available for Macintosh.)
What's This?	This shows pop-up tips when an icon or command button is clicked.
About PHOTO Browser	This shows PENTAX PHOTO Browser 2.0 version information. (For Macintosh, select [About PENTAX PHOTO Browser] on the [PENTAX PHOTO Browser] menu.)

^{*1:} PENTAX REMOTE Assistant is not included in the CD-ROM (S-SW28). The latest version can be downloaded from the PENTAX website.

This menu function can be used if PENTAX REMOTE Assistant is already installed.

Tool Bar

Frequently used functions are provided as Tool bar buttons. You can execute these functions easily from the Tool bar.

Double-click the Tool bar to remove it from the browser window and move it to a different position.



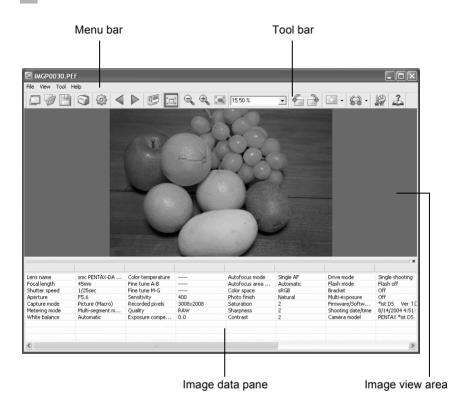


Number	Icon (button)	Content
1	Back	This opens the previously opened folder.
2	Forward	This opens the folder which was open before using the [Back] button.
3	Up	This moves up one folder in the directory tree.
4	Rename All	This changes the names of all selected files. (p.72)
5	Print	This prints the selected image file. (p.52)
6	S Undo	This undoes the previous file operation.
7	Cut	This prepares the selected file or folder to be moved to a different location. (p.67)

Number	Icon (button)	Content
8	Сору	This copies the selected file or folder. (p.67)
9	Paste	This copies the cut or copied file or folder into the selected folder. (p.67)
10	Delete	This deletes the selected file or folder. (p.70)
11	View Image	The selected image file appears in the main image view window. (p.38)
12	Filter	Click to select the type of file that appears in the Thumbnail pane. Uncheck the items you want to hide. Select from the following four items: PENTAX Image: Images captured with your PENTAX camera Other Image: Images other than those captured with your PENTAX camera (JPEG, TIFF, BMP, PNG, PICT) Folder: Folders
		Other : Files not compatible with PENTAX PHOTO Browser 2.0
13	Sort by	Click to select the sort key and ascending/ descending order from the pull-down menu. Thumbnails are sorted according to the selected order.
14	Thumbnail (Smallest)	The smallest size thumbnail appears in the Thumbnail pane. (p.38)
15	Thumbnail (Small)	A small size thumbnail appears in the Thumbnail pane. (p.38)
16	Thumbnail (Medium)	A medium size thumbnail appears in the Thumbnail pane. (p.38)
17	Thumbnail (Large)	A large size thumbnail appears in the Thumbnail pane. (p.38)

Number	Icon (button)	Content
18	Details	Image details appear in the Thumbnail pane without an image.
19	Default Position	This returns the window layout of PENTAX PHOTO Browser 2.0 to the default settings.
20	Slideshow	Selected or checked images appear in order. (p.49)
21	Save Image Data List	This saves additional information for all specified PENTAX PHOTO Browser 2.0 compatible image files into one CSV format file. (p.48)
22	PENTAX PHOTO Laboratory	This starts PENTAX PHOTO Laboratory 2.0. Specify the applicable image files within the Thumbnail pane of PENTAX PHOTO Browser 2.0. (p.76)
23	PENTAX REMOTE Assistant	This starts PENTAX REMOTE Assistant. PENTAX REMOTE Assistant can be used by installing it in the same folder as PENTAX PHOTO Browser 2.0 and using it together with *istD.
24	Options	This sets various settings for PENTAX PHOTO Browser 2.0. (p.60)
25	Help	This shows PENTAX PHOTO Browser 2.0 help contents.

Main Image Window



Menu bar

This executes functions or sets various settings of the main image window.

File menu	
View Browser	This shows the file browsing screen.
Open	This opens the [Open] dialog to select the file to open. If a check mark is next to "Open in new window", a new Main image view window opens and the selected image appears when a file is selected and [Open] is clicked. (p.38)
Save as	This saves the image being viewed in JPEG, TIFF, BMP, PNG or PICT format. (p.45)
Page Setup	This sets the page setup information for printing the selected image. (p.57)

File menu		
Print	This prints the current image. (p.52)	
Properties	Image file data appears. (p.44)	
Close	This closes the main image window.	

View menu	
	This also are all the the Teel Lee
Tool Bar	This shows or hides the Tool bar.
Image Data	This shows or hides the Image data pane.
Previous Image	The previous image appears when there are multiple images in one main image view window or images from the same folder in a separate display. This button cannot be selected if there are no images to view.
Next Image	The next image appears when there are multiple images in one main image view window or images from the same folder in a separate display. This button cannot be selected if there are no images to view.
Slideshow	Selected or checked images appear in order. (p.49)
Fit to Window	This fits the image to the window size. (p.42)
Enlarge	This doubles the view magnification of the image appearing in the image view area. The maximum view magnification is 4 times. (p.42)
Reduce	This halves the view magnification of the image appearing in the image view area. The minimum view magnification is 1/16. (p.42)
Life size	This sets the view magnification of the image appearing in the image view area to life size. (p.42)
Rotate View (Counterclockwise 90°)	This rotates the image 90° counterclockwise. This does not affect the data.
Rotate View (Clockwise 90°)	This rotates the image 90° clockwise. This does not affect the data.
Arrange Windows	This arranges multiple main image windows.

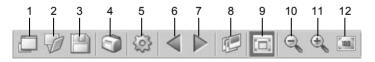
Tool menu	
Auto Image Fix	This automatically adjusts the brightness, contrast and color tone. Select Strong or Slight.
Rotate Image	Image data is rotated. Uncompressed images are rotated as is. When performing lossless rotation of an unprocessed JPEG image, the [Save File] dialog opens before the image appears. (p.46)
Options	This sets various settings for PENTAX PHOTO Browser 2.0. (p.60)

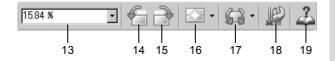
Help menu	
Help Topics	This shows PENTAX PHOTO Browser 2.0 help contents.
Index	This shows PENTAX PHOTO Browser 2.0 help index search. (This command is not available for Macintosh.)
What's This?	This shows pop-up tips when an icon or command button is clicked.
About PHOTO Browser	This shows PENTAX PHOTO Browser 2.0 version information. (For Macintosh, select [About PENTAX PHOTO Browser] on the [PENTAX PHOTO Browser] menu.)

• Tool bar

Frequently used functions are provided as Tool bar buttons. You can execute these functions easily from the Tool bar.

Remove the check mark next to [Tool Bar] on the [View] menu to hide the Tool bar.





Number	Icon (button)	Content
1		This shows the file browsing screen.
	View Browser	
2	Ta .	This opens the [Open] dialog to select the file to
	A	open. If a check mark is next to "Open in new window", a new Main image view window opens
	Open	and the selected image appears when a file is
		selected and [Open] is clicked.
3		This saves the image being viewed in JPEG,
	Cava	TIFF, BMP, PNG or PICT format. (p.45)
4	Save as	This prints the current image (p. 52)
4	8	This prints the current image. (p.52)
	Print	
5	~~a	This shows selected file properties. (p.44)
	£03	· · · · · · · ·
	Properties	
6		The previous image appears when there are
		multiple images in one main image view window or images from the same folder in a separate
	Previous Image	display. This button cannot be selected if there
		are no images to view.
7		The next image appears when there are multiple images in one main image view window
	Novt Image	or images from the same folder in a separate
	Next Image	display. This button cannot be selected if there
		are no images to view.
8		Selected or checked images appear in order. (p.49)
	Slideshow	(6.10)
9	Chacoriove	This fits the image to the window size. (p.42)
-		(P. 12)
	Fit to Window	
10		This halves the view magnification of the image
		appearing in the image view area. The minimum view magnification is 1/16. (p.42)
	Reduce	
11	(+)	This doubles the view magnification of the image appearing in the image view area.
		The maximum view magnification is 4 times.
	Enlarge	(p.42)

Number	Icon (button)	Content
12	Life size	This sets the view magnification of the image appearing in the image view area to life size (1:1). (p.42)
13	15.84 % T	The current view magnification appears. You can also set the view magnification by selecting it from the pull-down list, or by directly inputting the magnification. (p.42)
14	Rotate View (Counterclockwise 90°)	This rotates the image appearing in the image view area 90° to the left (counterclockwise). (p.41)
15	Rotate View (Clockwise 90°)	This rotates the image appearing in the image view area 90° to the right (clockwise). (p.41)
16	Auto Image Fix	Click and select or or to automatically adjust the brightness, contrast and color tone. Select Strong or Slight.
17	Rotate Image	Click and select or or to rotate the image data. Uncompressed images are rotated as is. When performing lossless rotation of an unprocessed JPEG image, the [Save as] dialog opens before the image appears. (p.46)
18	Options	The PENTAX PHOTO Browser 2.0 setup screen appears. This sets various settings for PENTAX PHOTO Browser 2.0. (p.60)
19	3 Help	This shows PENTAX PHOTO Browser 2.0 help contents.

• Image View Area

The image selected in the Thumbnail pane of PENTAX PHOTO Browser 2.0 appears.

• Image data pane

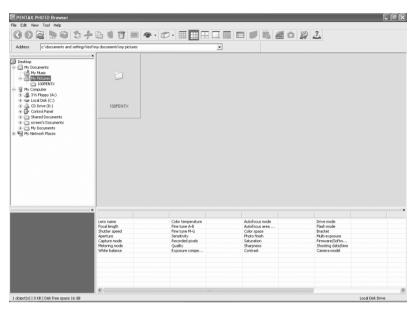
The image data appears for the image appearing in the image view area. Remove the check mark next to [Image Data] on the [View] menu to hide the Image data pane.

Place the cursor over a cell dividing line at the top of the pane and drag it to resize the cell. (For Macintosh, drag at the applicable position to resize the cell.)

Viewing Images

Display the images saved on your computer.

1 Open PENTAX PHOTO Browser 2.0.



In the folder tree, select the folder containing the image file to view.

Images in the selected folder appear as thumbnails in the Thumbnail pane.





You can change the size of the thumbnail image. In the [View] menu, select [Thumbnail (Smallest)], [Thumbnail (Small)], [Thumbnail (Medium)], or [Thumbnail (Large)]. Alternatively, click the \blacksquare , \blacksquare , or \square icon on the Tool bar.

Select an image in the Thumbnail pane.

Select one of the following methods for viewing an image:

- Click the image to view. The image is framed in blue.
 Hold down the Ctrl key or Shift key to select multiple images. (For Macintosh, hold down the Command key or Shift key to select multiple images.)

• Click the image to view and then select [Check Selected Image] - [Invert Selection] from the [Edit] menu.



Select [Open] from the [File] menu or click the icon on the Tool bar.

The main image window opens and the image appears.

Double-click the image file to view in the Thumbnail pane. The main image window opens and the image appears in one step.

• RAW image file display

PENTAX PHOTO Browser 2.0 allows you to select between [Simple display] and [Auto RAW display] when displaying RAW image files in the main image window. (p.62)

Simple display : Images can be viewed quickly, but image quality is

inferior.

Auto RAW display: It takes time to display the actual raw data, but the

image quality is superior.

Select from three levels for the processing ratio on the

[View] tab of the [Options] dialog. (p.62)

Rotating the Image View

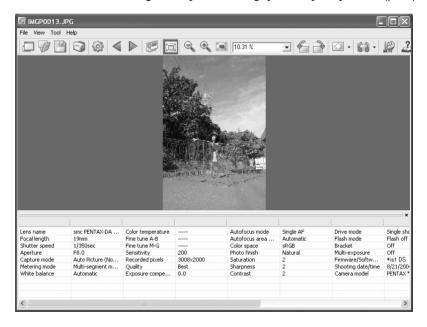
The image in the image view area can be rotated 90°, 180°, or 270° to the right (clockwise) or left (counterclockwise).

Select [Rotate View (Clockwise 90°)] or [Rotate View (Counterclockwise 90°)] from the [View] menu in the main image window.

Alternatively, click the or icon on the Tool bar.

The image appears rotated.

To save the rotated image, use [Rotate Image] on the [Tool] menu. (p.46)



Changing the View Magnification

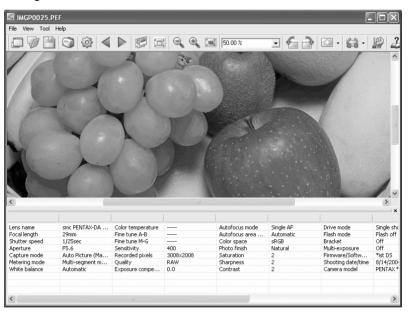
You can change the image view magnification of the image appearing in the image view area.

Select [Fit to Window], [Enlarge], [Reduce] or [Life size] from the [View] menu in the main image window.

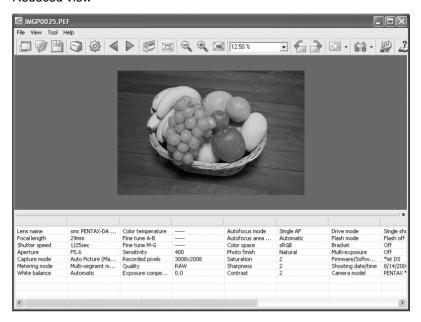
Alternatively, click the , , , or is icon on the Tool bar.

The image view magnification can be adjusted from 1/16 to 4 times.

Enlarged view



Reduced view





You can also enlarge or reduce the view by directly inputting the numerical value of the magnification in the View Magnification box on the Tool bar.

Hiding the Tool Bar and Image Data Pane

You can set whether to show or hide the Tool bar and image data pane in the main image window.

Select [Tool Bar] or [Image Data] from the [View] menu in the main image window and uncheck the item.

The Tool bar or image data pane is hidden.





To display the Tool bar or image data pane, select [Tool Bar] or [Image Data] from the [View] menu in the main image window and check the item.

Displaying Image Properties

You can display file data for the image file appearing in the main image window. (p.74)

Saving an Image

You can save the displayed image using any of the following file formats. RAW data can be saved with any of these formats to view the image with image processing software.

JPEG : JPEG image with image data TIFF (8 bit) : TIFF image with image data

TIFF (16bit) : High quality TIFF image with image data

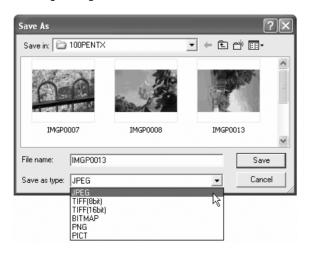
BITMAP : BMP image without image data PNG : PNG image without image data PICT : PICT image without image data

Select [Save as] from the [File] menu in the main image window or click the [incomposition on the Tool bar.

The [Save as] dialog appears.

If RAW data is viewed in Simple display or is reduced, the message [Image is shown in simple display mode. Do you wish to return image to full size?] appears. If [No] is selected, the image is saved as it is displayed. The quality is inferior to that of an image processed to full size.

Specify [Save in], [File name] and [Save as type], and then click [Save].



The image is saved.

Saving a Rotated Image

Data of the displayed image is rotated 90° left or right. Rotation of the image may take time depending on the size of the image.

A warning message appears when closing the main image window without saving the image or when clicking \square \triangleright .

Select [Rotate Image], [Counterclockwise 90°] or [Clockwise 90°] from the [Tool] menu in the main image window, or click on the right of the icon and then click the or icon.

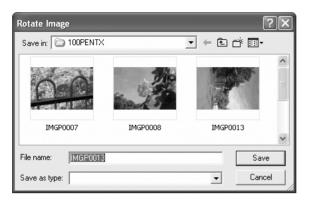


The image data appears rotated. When performing lossless rotation of an unprocessed JPEG image, the [Save File] dialog opens before the image appears.

2 Select [Save as] from the [File] menu in the main image window or click the icon on the Tool bar.

The [Rotate Image] dialog appears.

Specify [Save in], [File name] and [Save as type], and then click [Save].



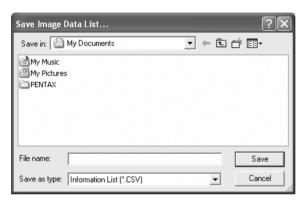
The image is rotated and saved.

Saving a List of Image Data

Use the check boxes to save the image data from multiple folders into one CSV format file. If no images are selected or checked, all the image data in the current folder is saved.

Select [Save Image Data List] from the [Tool] menu in the PENTAX PHOTO Browser 2.0 window or click the icon on the Tool bar.

The [Save Image Data List] dialog appears.



2 Specify the file name and save destination, and then click [Save].

The image data is saved in CSV format.



When thumbnail images are checked, data is saved only for those images. Image data is also saved for checked images contained in other folders. When a thumbnail image is selected, only data for the selected image is saved.

Continuous Image Playback in a Slideshow

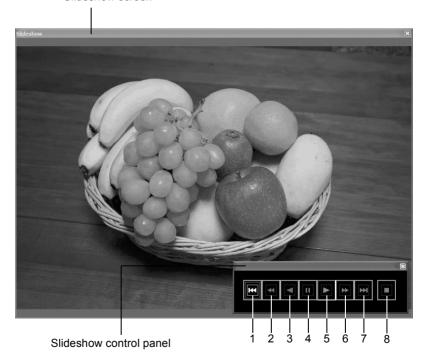
This section explains how to set up and operate the slideshow.

- Select an image or folder in the PENTAX PHOTO Browser 2.0 window.
- Select [Slideshow] from the [View] menu or click the icon on the Tool bar.



The Slideshow screen and Slideshow control panel open.

Slideshow screen



Number	Icon (button)	Content
1	First Image	Returns to the first image. When this is pressed during a slideshow, the first image appears and the slideshow pauses.
2	Rewind	Rewinds slideshow. When this is pressed during a slideshow, the next image appears and the slideshow pauses.
3	Previous Image	Slideshow is played in reverse order.
4	Pause	Pauses slideshow.
5	Play	Plays slideshow.
6	Fast Forward	Fast-forwards slideshow. When fast-forwarding during a slideshow, the next image appears and the slideshow pauses.
7	Last Image	Shows last image. You can use this during a slideshow. The last image appears and the slideshow pauses.
8	Stop	Stops slideshow.



Press the Play button.

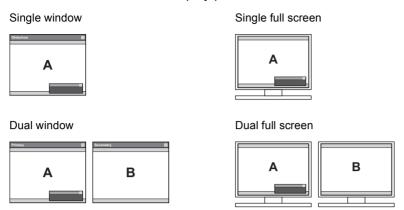
The slideshow starts.

Slideshow Settings

When viewing the slideshow, select between a single window and a dual window. Additionally, view the slideshow in single full screen or dual full screen mode (only if the computer is compatible with dual screen display).

Set the slideshow order from the [Slideshow] tab on the [Options] dialog. The order for frame advance during the slideshow is determined by the View Order setting on the [Frame Advance] tab of the [Options] dialog. (p.65)

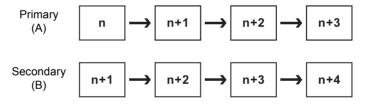
Select from one of the four display patterns below.



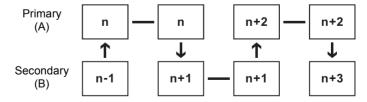
• Image display order for dual window

When using dual window or dual full screen, select the display pattern for images on the primary and secondary monitors.

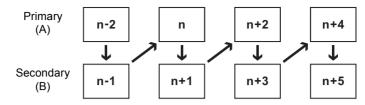
Advance in order



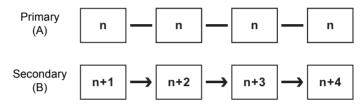
Advance alternate



Advance two frames



Set primary image



Printing an Image

When printing image files, select between Print Index and Print Photo.

Print Index Prints a thumbnail and image data for an image.

Print photo Prints a high-quality print of an image. You can print multiple

images on one page or print one large image on multiple pages

using partition printing.

Using Print Index

- In the Thumbnail pane of the PENTAX PHOTO Browser 2.0 window, select the images to print.
- Select [Print] from the [File] menu.

 Alternatively, click the icon on the Tool bar.

The [Print] dialog appears.

Select the [Print Index] tab.



Make the layout and caption settings.

Item		Description
Prev	riew	This displays a preview using the specified settings.
Layo	out	Select from three layout patterns.
Num page	ber of images per	From the list, specify the number of images to print on one page.
Capt	tion	The caption settings are explained below. The contents that appear depend on the selected layout.
	Position	Select the image caption position from the list.
	Contents	Specify the data that may be printed from the list.
	Font	Select a font from the list. The default setting is the standard system font.
	Size	Select a font size from the list.
Print	er	The name of the printer to be used appears here.



- The image size is calculated automatically from the margins, number of images, and caption size.
- Click the [Page Setup] button to make the page settings. (p.57)
- Click the [Printer Settings] button to make the printer settings. (p.58)

5 Click [OK].

Printing starts.

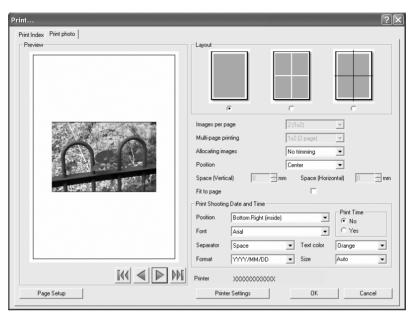
Using Print Photo

- In the Thumbnail pane of the PENTAX PHOTO Browser 2.0 window, select the images to print.
- Select [Print] from the [File] menu.

 Alternatively, click the icon on the Tool bar.

The [Print] dialog appears.

Select the [Print photo] tab.



Make the layout and caption settings.

Item	Description
Preview	This displays a preview using the specified settings.
Layout	Select from three layout patterns. Layout 1: Normal printing
	(with no margins depending on the printer) Layout 2: Layout printing Layout 3: Partition printing (printing one image on multiple pages)
Images per page	From the list, select the number of images to print on one page.
Multi-page printing	Select the number of partitions per page from the list.
Allocating images	Select processing options from the list when printing area and image size differ. No trimming: The image does not exceed the printing area. Trimming: The entire printing area is used and any part exceeding the printing area is deleted.

Item	Description
Position	Select the position of the image in the printing area from the list.
Space (Vertical)/Space (Horizontal)	Set the vertical and horizontal space in mm.
Fit to page	This setting uses the printing area most effectively. Check this to allow the image to be rotated 90° as needed to fit the printing area and then printed.
Print Shooting Date and Time	Set the Shooting data/time print settings. Position: Selects position to print Shooting date/ time. Font: Select a font from the list. The default setting is the standard system font. Print Time: Select from Do Not Print (Default) or Print (HH:MM, 24-hour format only). Separator: Sets dividers in text. Format: Sets date format. Text color: Sets the font color. Size: Select a font size from the list.
Printer	The name of the printer to be used appears here.



- The image size is calculated automatically from the margins, spacing, and number of images.
- The printing orientation of the date/time depends on the image data (for Windows only). The printing position is in a relative position to the image data.
- Click the [Page Setup] button to make the page settings. (p.57)
- Click the [Printer Settings] button to make the printer settings. (p.58)



Click [OK].

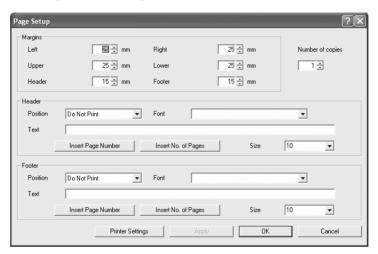
Printing starts.

Using Page Setup

Use Page Setup to set printing options such as margins, headers/footers, and number of copies.

Select [Page Setup] from the [File] menu in the PENTAX PHOTO Browser 2.0 window or click [Page Setup] on the [Print] dialog.

The [Page Setup] dialog appears.



Make the settings.

Item		Description
Margins	Left, Right, Upper, Lower	The default setting is 25 mm on each side.
	Header/ Footer	The default setting is 15 mm from the top and bottom edges.
Number of	copies	Specify the number of copies to print.
Header/ Footer	Text	Enter text to print for the header/footer.
	Insert Page Number	When this is clicked, [#Page number] is inserted at the cursor location in the Text field.
	Insert Number of Pages	When this is clicked, [#Number of pages] is inserted at the cursor location in the Text field.

Item		Description
	Position	Sets header/footer position. Select from Do Not Print (Default), Align left, Align center, and Align right.
	Font	Select a font from the list. The default setting is the standard system font.
	Size	Select a font size from the list. The default setting is 10 point.

Glick [OK].

The page setup information is set.

Using Printer Settings

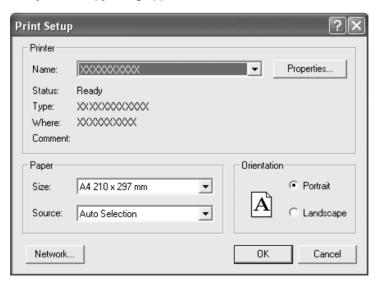
Check the printer settings and change the settings as needed. Refer to the printer user's manual for details on printer settings.



This section describes the printer settings for Windows. For Macintosh, the printer setting screen is dependent on the OS.

Click [Print Setup] on the [Print] or [Page Setup] dialog.

The [Print Setup] dialog appears.



Make the settings.

Item		Description
Name		Select the printer to use from the list. Click [Network] to select a printer on the network. Click [Properties] to make advanced printer settings.
Paper	Size	Select paper size.
	Source	Select paper feeding method.
Orienta	tion	Sets printing direction. Select [Portrait] or [Landscape].

Click [OK].

The printer setup information is set.

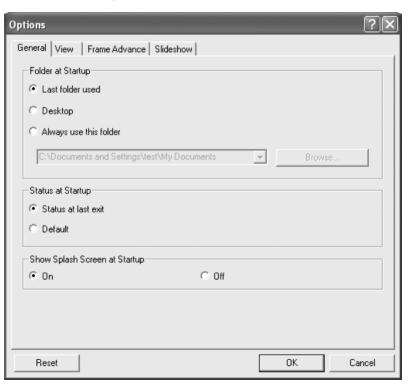
Changing the PENTAX PHOTO Browser 2.0 Settings

Here, you can set the PENTAX PHOTO Browser 2.0 startup settings, such as the initial image view size, thumbnail caption viewing, and RAW file view format.

Select [Options] from the [Tool] menu in the PENTAX PHOTO Browser 2.0 window.

Alternatively, click the 🔛 icon on the Tool bar.

The [Options] dialog appears.



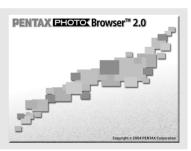
[General] tab settings

Change the startup settings for PENTAX PHOTO Browser 2.0 in the [General] tab.

Item	Description
Folder at Startup	From the following, select the folder to open when starting the program. Last folder used: This opens the folder that was last used in PENTAX PHOTO Browser 2.0. Desktop: This opens the desktop. Always use this folder: Click [Browse] to specify a folder.
Status at Startup	Set PENTAX PHOTO Browser 2.0 status at startup. Status at last exit: When the next session of PENTAX PHOTO Browser 2.0 is started, the settings from the previous session are used. Default: The default screen appears.
Show Splash Screen at Startup	Sets splash screen when PENTAX PHOTO Browser 2.0 starts. On : Splash screen is shown. Off : Splash screen is not shown.



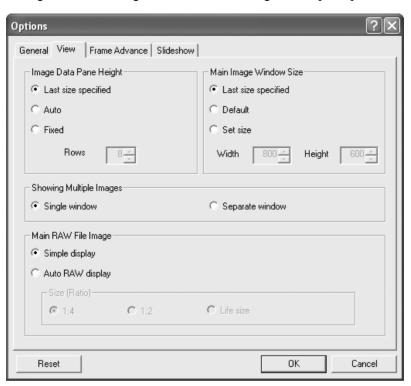
The splash screen is the title screen that appears when PENTAX PHOTO Browser 2.0 starts.



Item

[View] tab settings

Change the Main Image View window settings in the [View] tab.



Item	Description
Image Data Pane Height	Sets the height of the Image data pane that appears when the main image window opens. Last size specified: Sets Image data pane height to be the same as the previous height when the main image view window opens. Auto: The height is automatically adjusted. Fixed: The number of lines may be specified.
Main Image Window Size	Set the window size of the main image view window. Last size specified: Opens the main image view window to the last window size specified. Default: Opens the window to the default size. Set size: Specifies the size of the main image window in pixels.

Description

Item	Description
Showing Multiple Images	When multiple images are selected in the Thumbnail pane, select the viewing method in the main image view window. Single window: Images appear in one main image view window. Click the Dicons on the Main image view window Tool bar to switch the image view. Separate window: Images appear in multiple main image view windows.
Main RAW File Image	Sets view when opening a new RAW image file. Simple display: The compressed image data in the RAW image file appears. The image data appears more quickly, but there is quality loss due to the high compression rate. Therefore, this function is not recommended for checking image details. Auto RAW display: The actual RAW data appears. (Full Auto Processing)
	Size (Ratio): Select the processing ratio for Auto RAW display from [1:4], [1:2], or [Life size]. When emphasizing speed, select [1:4]. When emphasizing quality, select [Life size].

[Frame Advance] tab settings

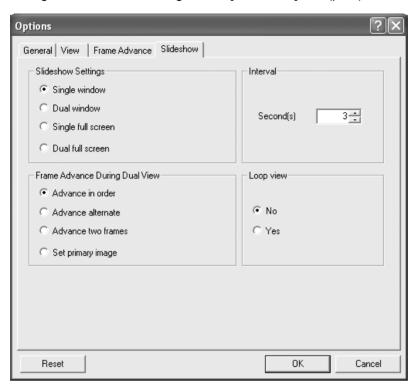
Change the main image view window frame advance settings in the [Frame Advance] tab.



Item	Description
View Attributes to Maintain	Selects view attributes to maintain during frame advance. Multiple attributes may be selected. Zoom : View magnification rate is maintained. Position : Position is maintained. Direction: Direction is maintained.
View Order	Selects ordering for frame advance. Slideshow is played in the same order. Select from the options below. File name : Frames advance in file name order. Shooting date/time: Frames advance in shooting date/time order. File date/time : Frames advance in file date/time order.

[Slideshow] tab settings

Change the slideshow settings in the [Slideshow] tab. (p.49)



Item	Description
Slideshow Settings	Set the pattern when viewing slideshows. Single window: View slideshow in a single window. Dual window: View slideshow in two windows (primary and secondary). Single full screen: View slideshow full-screen on a single monitor. Dual full screen: View slideshow full-screen on two monitors.
Interval	Sets interval for frame advance during slideshows. Second(s): Sets interval (in seconds) for frame advance.

Item	Description
Frame Advance During Dual View	Set the refresh method when viewing two images simultaneously. (p.51) Advance in order: Frames advance in order. The secondary window shows one image ahead of the primary window.
	Advance alternate: At each frame advance interval, images are shown alternately on the primary and secondary windows. With the first image starting at zero, even number images are shown on the primary window and odd number images are shown on the secondary window. Advance two frames:
	Frames advance in twos. Set primary image: The primary window shows a fixed image. The secondary window shows images, which advance in order.
Loop view	Sets the repeat view setting. No : When all of the images have been shown, the slideshow ends. Yes : Even after a slideshow ends, the slideshow repeats until is clicked.

2 After making your selections, click [OK].

The options are set and the [Options] dialog closes. Click [Reset] to return all options to default settings.



When [Reset] is clicked, all tab settings including the settings of the currently open tab are returned to default settings.

Managing Image Files and Folders

Moving/Copying Image Files

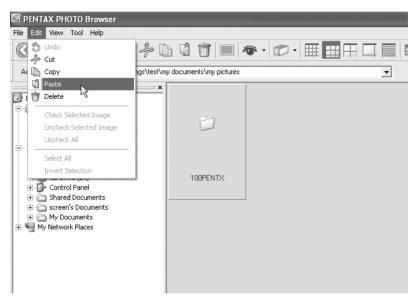
- In the Thumbnail pane of the PENTAX PHOTO Browser 2.0 window, select the thumbnail image to move or copy.
- Select [Cut] or [Copy] from the [Edit] menu.
 Alternatively, click the or icon on the Tool bar.



Specify the destination folder for moving or copying in the Folder tree pane.

Select [Paste] from the [Edit] menu.

Alternatively, click the [3] icon on the Tool bar.



The image file is moved or copied to the specified folder.





- You can also move an image by dragging and dropping a thumbnail image to the destination folder. To copy, hold down the Ctrl key while you drag and drop the file. (For Macintosh, hold down the Option key while you drag and drop the file.)
- Use the same procedure to move or copy a folder. In the Folder tree pane, specify the folder to move or copy. The specified folder is moved or copied into the destination folder.

Deleting Image Files/Folders

- In the Thumbnail pane of the PENTAX PHOTO Browser 2.0 window, select the thumbnail image to delete.

 Alternatively, select the folder to delete in the Folder tree pane.
- Select [Delete] from the [Edit] menu.

 Alternatively, click the in icon on the Tool bar.



A delete confirmation screen appears.

Glick [Yes].

The image file or folder is deleted.

Changing Image File/Folder Names

- In the Thumbnail pane of the PENTAX PHOTO Browser 2.0 window, select the thumbnail image to be renamed.

 Alternatively, select the folder to be renamed in the Folder tree pane.
- Select [Rename] from the [File] menu.
 Alternatively, directly click the file or folder name in the Thumbnail pane or Folder tree pane.

The file or folder name is ready to be changed.



Input the file or folder name.

The image file or folder is renamed.

Renaming All File Names

In the Thumbnail pane of the PENTAX PHOTO Browser 2.0 window, select or check the thumbnail images to be renamed.

Select [Select All] from the [Edit] menu to select all images in the Thumbnail pane. Images from more than one folder cannot be selected.

Select [Rename All] from the [File] menu.

Alternatively, click the Dutton from the tool bar.

The [Rename All] dialog appears.



Confirm the content, and input information as needed.

Item	Description
Base file name	Specify name to add to file names. "IMGP" is added by default.
Number of digits	Specify the number of digits to add to file names. 1 to 5 digits may be specified. 4 digits are specified by default. (Example: IMGP1234.pef) When files exist in the folder with the specified base file name, the number of digits increases if the maximum number of files is exceeded.
Put base file name last	When this check box is checked, the file name specified in [Base file name] is added to the end of all file names. (Example: 0123IMGP.pef) Base name file is added to the beginning by default.

Item	Description	
Start number	Sets the start number. When files exist in the folder with the same specified base file name, the numbering automatically starts from the number next to the highest number of the existing file. If there is no file with the specified base file name, numbering starts at 1.	

4 Click [OK].

All files are renamed to the specified name.

Create a New Folder

- In the Folder tree pane of the PENTAX PHOTO Browser 2.0 window, select the folder where to create a new folder. Alternatively, select the Thumbnail pane.
- Select [Create New Folder] from the [File] menu.

A new folder is created under the specified folder or in the Thumbnail pane.



Displaying Properties of Image Files/Folders (for Windows)



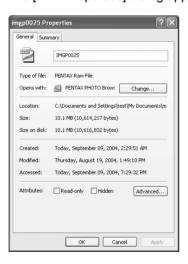
The contents of the Properties dialog depends on the version of Windows currently running. Refer to Help in Windows for details on the Properties dialog settings.

In the Thumbnail pane of the PENTAX PHOTO Browser 2.0 window, select the thumbnail image for which properties are to be shown.

Alternatively, in the Folder tree pane, select the folder for which properties are to be shown.

2 Select [Properties] from the [File] menu.

The [XXX Properties] dialog appears.





- Confirm the content, and input information as needed.
- 4 Click [OK].

The Properties dialog closes.

Displaying Properties of Image Files/Folders (for Macintosh)



The standard Macintosh information dialog appears. Refer to Help in Macintosh for details on the information dialog settings.

- In the Thumbnail pane of the PENTAX PHOTO Browser 2.0 window, select the thumbnail image for which properties are to be shown.
 - Alternatively, in the Folder tree pane, select the folder for which properties are to be shown.
- 2 Select [Properties] from the [File] menu.

The [XXX Info] dialog appears.



- **3** Confirm the content, and input information as needed.
- Click the button.

The Information dialog closes.

PENTAX PHOTO Laboratory 2.0

PENTAX PHOTO Laboratory 2.0 is software for color separation processing and other processing of CCD RAW image data recorded in a PENTAX digital camera dedicated format. The processing of RAW data enables images to be viewed on commercially-available image viewing and editing software.

This section describes opening and closing PENTAX PHOTO Laboratory 2.0 and viewing the PENTAX PHOTO Laboratory 2.0 window, and explains its functions.

Opening PENTAX PHOTO Laboratory 2.0

For Windows

- 1 Select the start menu on the desktop.
- Select [PENTAX PHOTO Laboratory] from [PENTAX Digital Camera Utility] in the program menu.

PENTAX PHOTO Laboratory 2.0 is opened, and the PENTAX PHOTO Laboratory 2.0 window appears.



Closing PENTAX PHOTO Laboratory 2.0

Select [Exit] from the [File] menu on the PENTAX PHOTO Laboratory 2.0 window.

For Macintosh

- 1 Double-click the [PENTAX PHOTO Laboratory] folder in [PENTAX Digital Camera Utility] on the hard disk.
- Double-click the [PENTAX PHOTO Laboratory] program icon.

PENTAX PHOTO Laboratory 2.0 is opened, and the PENTAX PHOTO Laboratory 2.0 window appears.



Closing PENTAX PHOTO Laboratory 2.0

Select [Quit PENTAX PHOTO Laboratory] in [PENTAX PHOTO Laboratory] on the desktop menu bar.



PENTAX PHOTO Laboratory 2.0 can also be started from within PENTAX PHOTO Browser 2.0. (p.29)

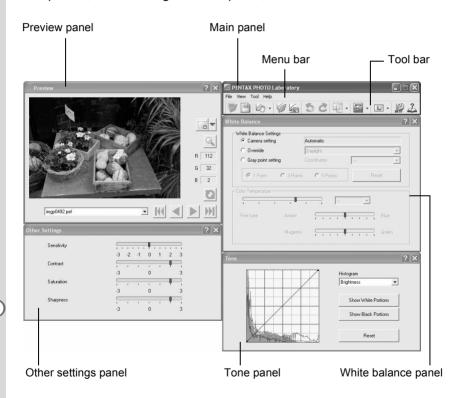
About the PENTAX PHOTO Laboratory 2.0 Window

This section explains the PENTAX PHOTO Laboratory 2.0 window layout, names, and functions.

PENTAX PHOTO Laboratory 2.0 is made up of five panels.

The panels appear in independent windows and may be placed anywhere on the screen. Select [Arrange Windows] from the [View] menu to align the panels.

Four panels, not including the main panel, can be hidden or shown.





- When the processing mode is set to Full Auto Processing mode
 Mite balance panel, Tone panel, and Other settings panel do not appear.
 (p.82)
- When RAW image data is not selected, the preview image does not appear. (p.83)

• Main panel

This executes functions or sets various settings of PENTAX PHOTO Laboratory 2.0.

For Macintosh, the Main panel only contains the Tool bar. The Menu bar appears at the top of the desktop.

Preview panel

View the selected RAW image in four steps, show specified areas enlarged, and preview adjustments from the other panels. View adjustments in real time or by clicking the Refresh button.

White balance panel

Select white balance or set color temperature. Adjust the image color tone, such as when the image appears bluish or yellowish. (p.88)

• Tone panel

Displays tone curve and histogram information of displayed image. (p.89) Adjust the image tone using the tone curve.

• Other settings panel

Adjust characteristics such as sensitivity, contrast, color depth, and edges. (p.90)

Menu bar

This executes functions or sets various settings of PENTAX PHOTO Laboratory 2.0.

File menu	
Open	This selects the image file for processing in PENTAX PHOTO Laboratory 2.0. Only applies when the software is started as standalone. This cannot be used when PENTAX PHOTO Laboratory 2.0 is started within the PENTAX PHOTO Browser 2.0 window. (p.84)
Save	This performs RAW image data processing and saves it with the specified format. The available save formats are JPEG (5 compression rates), TIFF-8, and TIFF-16. Use [Save Mode] on the [Tool] menu to specify the save format. (p.91)
Recall Adjustment	Use this function to load previously saved settings for the various panels. (p.93)
Save Adjustment	Use this function to save the settings currently used in the various panels. (p.93)

File menu	
Exit	This closes PENTAX PHOTO Laboratory 2.0. (For Macintosh, select [Exit PENTAX PHOTO Laboratory] on the [PENTAX PHOTO Laboratory] menu.)

View menu	
Full Auto Processing	All RAW images are processed using specified settings. All panels, except the Preview panel, are hidden. (p.86)
Custom Processing	This performs processing using the processing condition settings specified by the user. The processing conditions are set using the White balance panel, Tone panel, and Other settings panel. (p.87)
First Image	When multiple images are selected, the preview of the first image in order of registration appears.
Previous Image	When multiple images are selected, the preview of one image ahead in order of registration appears.
Next Image	When multiple images are selected, the preview of one image back in order of registration appears.
Last Image	When multiple images are selected, the preview of the last image in order of registration appears.
Refresh Preview	When real-time preview is not enabled, the preview is refreshed using the current settings.
Display Size	This specifies the size of the image data in the preview.
Preview	This shows or hides the Preview panel.
White balance	This shows or hides the White balance panel.
Tone	This shows or hides the Tone panel.
Other settings	This shows or hides the Other settings panel.
Arrange Windows	This arranges the displayed panels.

Tool menu	
Undo	When in Custom Processing mode, use this function to cancel the previous operation. You can undo up to five operations.
Redo	When in Custom Processing mode, use this function to redo an operation that was cancelled with the [Undo] button.

Tool menu	
Image Mode	Select types of image modifications. When Full Auto Processing is set, images are processed using individual file settings. When in Custom Processing mode, all images are processed using the selected processing mode. Some modes may not be able to be set depending on the RAW file type.
Save Mode	This sets the quality when saving processed images. Save images in JPEG format with one of five different compression rates or in TIFF format with one of two bit types. The default setting is JPEG (Highest Quality).
Save Size	This sets the size in pixels when saving processed images. (p.91)
Options	This sets various settings for PENTAX PHOTO Laboratory 2.0. (p.94)
·	-

Help menu	
Help Topics	This shows PENTAX PHOTO Laboratory 2.0 help contents.
Index	This shows PENTAX PHOTO Laboratory 2.0 help index search. (This command is not available for Macintosh.)
What's This?	This shows pop-up tips.
About PHOTO Laboratory	This shows PENTAX PHOTO Laboratory 2.0 version information. (For Macintosh, select [About PENTAX PHOTO Laboratory] on the [PENTAX PHOTO Laboratory] menu.)

Tool Bar

This executes functions or sets various settings of PENTAX PHOTO Laboratory 2.0.



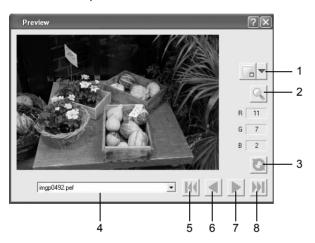
Number Icon (button)	Content
1 Open	This selects the image file for processing in PENTAX PHOTO Laboratory 2.0. Only applies when the software is started as standalone. This cannot be used when PENTAX PHOTO Laboratory 2.0 is started within the PENTAX PHOTO Browser 2.0 window. (p.84)

Number	Icon (button)	Content
2	Save	This performs RAW image data processing and saves it with the specified save mode and image size. (p.91)
3	Full Auto Processing	This appears when Full Auto Processing is set. Performs processing using the processing conditions set in the RAW file. Click To select or from the pull-down menu.
	Custom Processing	This is displayed when Custom Processing is set. This performs processing using the processing condition settings specified by the user. The processing conditions are set using the White balance panel, Tone panel, and Other settings panel. (p.87)
4	Recall Adjustment	When in Custom Processing mode, this recalls a saved adjustment file. (p.93)
5	Save Adjustment	This saves the processing conditions set in Custom Processing mode as an adjustment file. (p.93)
6	5 Undo	When in Custom Processing mode, use this function to cancel the previous operation. You can undo up to five operations.
7	Redo	When in Custom Processing mode, use this function to redo an operation that was cancelled with the [Undo] button.
8	Image Mode	This displays the current Image mode. When Full Auto Processing is set, images are processed using individual file settings. When in Custom Processing mode, click to select the Image mode. All images are processed using the selected processing mode. Some modes may not be able to be set depending on the RAW file type. (p.86)
9	Save Mode	This displays the current Save mode. Click to select the save format for the processed image file. (p.91)
10	Image Size	This displays the current Image mode. Click to select the size of the processed image file. (p.91)

Numbe	r Icon (button)	Content
11	Options	This is used to change the PENTAX PHOTO Laboratory 2.0 settings. (p.94)
12	L Help	This shows PENTAX PHOTO Laboratory 2.0 help contents.

Preview Panel

This shows a preview of the RAW file.



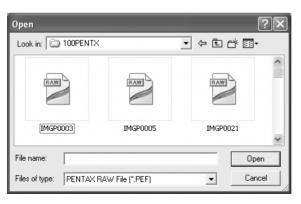
Number	r Icon (button)	Content
1	Display Size	Click to select the size of the image data in the preview from the pull-down menu. Select from Small, Medium, Large, or Full Size.
2	Enlarge Area	When this is turned on, a red frame appears in the preview area. The Enlarge area window appears and the magnification can be selected.
3	Refresh	Click this to refresh the preview using the current settings when [Refresh Preview] becomes the [Refresh] button on the Options settings of PENTAX PHOTO Laboratory 2.0.

Number	Icon (button)	Content
4		When multiple images are selected, select the image to display from the list.
5	First Image	When multiple images are selected, the preview of the first image in order of registration appears.
6	Previous Image	When multiple images are selected, the preview of one image ahead in order of registration appears.
7	Next Image	When multiple images are selected, the preview of one image back in order of registration appears.
8	Last Image	When multiple images are selected, the preview of the last image in order of registration appears.

Viewing Images

1 Click the button in the PENTAX PHOTO Laboratory 2.0 window.

The [Open] dialog appears.



2 Specify the file name of a RAW image file to display and click the [Open] button.

A RAW image appears in the Preview panel of the PENTAX PHOTO Laboratory 2.0 window.





- When starting PENTAX PHOTO Laboratory 2.0 from PENTAX PHOTO Browser 2.0, use the following methods for viewing image files. Select RAW image files in PENTAX PHOTO Browser 2.0, then start PENTAX PHOTO Laboratory 2.0. RAW image files can also be selected in PENTAX Photo Browser 2.0 after PENTAX PHOTO Laboratory 2.0 has been started.
- To select multiple image files in PENTAX PHOTO Browser 2.0, check the
 thumbnail images or press and hold the Ctrl key as you left click on thumbnail
 images you want to select. (For Macintosh, hold down the Command key and
 click thumbnail images to select multiple images.) Files can be selected using
 the check boxes if there are no files checked and selected (indicated by a
 blue frame) when PENTAX PHOTO Laboratory 2.0 is started.

Opening PENTAX PHOTO Browser 2.0

- Select a RAW image in the PENTAX PHOTO Browser 2.0 window.
- Select [PENTAX PHOTO Laboratory 2.0] on the [Tool] menu of PENTAX PHOTO Browser 2.0 or click the 🗾 icon.

A RAW image appears in the Preview panel of the PENTAX PHOTO Laboratory 2.0 window.

Easily Modifying RAW Images

Select an Image mode to easily process RAW images according to shooting conditions.

When in Full Auto Processing mode, RAW images are processed using the Image mode selected at the time of capture. This setting cannot be changed in PENTAX PHOTO Laboratory 2.0.

When in Custom Processing mode, the Image mode can be selected. All frames are processed using the same selected Image mode.

Select from the following seven Image modes when using *istDS:

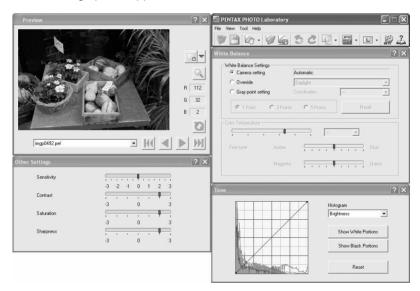
	Natural	Elaborates images with natural colors.
	Bright	Elaborates sharp, bright images.
*	Picture (Portrait)	Elaborates images with beautiful skin tones.
	Picture (Landscape)	Enhances the contour and saturation of images with greenery, blue sky, etc., to create images with bright colors.
*	Picture (Macro)	Elaborates images with vivid close ups of flowers and other objects.
38	Picture (Moving Object)	Elaborates sharp images of fast-moving objects.
*	Picture (Night Scene Portrait)	For capturing people against the background of sunsets or night scenes.

Setting RAW Image Data Processing Conditions

Set individual processing conditions to create unique image modifications.

Select [Custom Processing] from the [View] menu, or click on the icon on the Tool bar and then click (Custom Processing) on the drop-down list.

The Main panel, Preview panel, White balance panel, Tone panel, and Other settings panel appear.





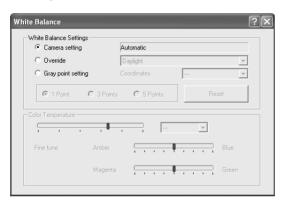
To close the White balance panel, Tone panel, or Other settings panel, select [Full Auto Processing] from the [View] menu, or click on the local icon on the Tool bar and then click (Full Auto Processing) on the drop-down list. The image is processed using the Image mode set at the time of shooting, and the settings cannot be changed in PENTAX PHOTO Laboratory 2.0.

Item

2 Enter settings in each setting panel.

The settings are reflected in the Preview panel. There are two ways to reflect the settings. (p.94)

- · Reflect the settings immediately in real time.
- Reflect the settings when clicking the icon on the Preview panel.
- Setting the White balance

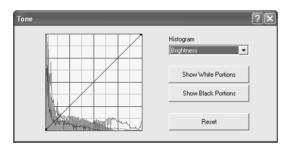


Content

White Balance Settings	Select from	n the following: ettina:
	oumora o	Apply the white balance setting used on
	Override:	your camera. Use [White Balance Setting] to select the white balance to apply. Select from [Daylight], [Shade], [Cloudy], [Daylight fluorescent light], [Neutral white fluorescent light], [White fluorescent light], [Tungsten
		light], [Flash], or [Color temperature setting].
	Grey point	t setting:
		Select the point in the preview image to turn gray. Specify using the pointer for the most appropriate white balance setting. Select from 1 point, 3 points, or 5 points. When shooting with the gray panel with Grey point setting, a more accurate white balance may be achieved. Click [Reset] to delete the selected gray points.

Item	Content
Color temperature	This can be set when selecting [Color temperature setting] with [Override] from [White Balance Settings]. Color temperature: Slide the bar to set the color temperature or select the setting from the list. Select from between 2500K to 10000K (in Kelvin). Fine tune: Use Fine tune to correct errors in color during shooting using the Amber, Blue, Magenta, and Green slide panels. The fine tuned areas are not reflected in the color
	•

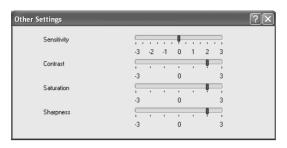
• Setting the Tone curve/Histogram



Item	Content
Tone curve	Adjust the tone curve to make precise adjustments to the density and contrast. Change the tone curve using the pointer. Move the curve up to brighten and move the curve down to darken the image. Click a point on the tone curve to fix the curve at that point. A black dot appears. Drag the black dot to move the fixed location. Right-click to erase the black dot. (For Macintosh, hold down the Ctrl key while you drag the black dot.)
Histogram	Brightness shows the distribution of luminosity when combining RGB, R (Red), G (Green) and B (Blue).
[Show White Portions]/ [Show Black Portions]	Click [Show White Portions] to show white portions of the image on the Preview panel in black. Click [Show Black Portions] to show black portions of the image on the Preview panel in white.
[Reset]	Deletes the tone curve settings, and returns to a straight line.

• Setting the Sensitivity/Contrast/Saturation/Sharpness

Set these using the Other settings panel.



Item	Content
Sensitivity	Changes the sensitivity of processing. +: The image becomes brighter: The image becomes darker.
Contrast	Adjusts the contrast between light and shadow. +: Increases contrast between light and shadow: Decreases contrast between light and shadow.
Saturation	Adjusts the strength of the colors after RAW data development. +: The colors become stronger: The colors become weaker.
Sharpness	Adjusts the sharpness of the edges. +: Image contour is enhanced: Image contour is softened.

Saving Image Files

You can save the image files which have been Full Auto processed or Custom processed. Specify the save format and image size when saving image files. Save images in JPEG format with one of five different compression rates, or in TIFF-8 or TIFF-16 format.

As the compression rate increases, the file size decreases, but the quality also deteriorates.

Select from S, M, or L for the image size.

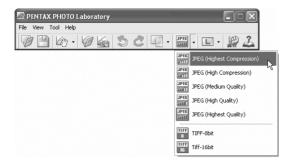
Size	Pixels
	3008×2008
M	2400×1600
S	1536×1024

Select [Save Mode] from the [Tool] menu, or click on the right of the icon to select the save format.

Select the quality and file format when saving RAW images.

For JPEG files, image data is compressed and saved. Select from Highest Compression, High Compression, Medium Quality, High Quality, and Highest Quality. Select High or Highest Compression to make the file size smaller by lowering quality. Select High or Highest Quality to maintain high quality by keeping the file size large.

Select TIFF-8 or TIFF-16 to avoid quality loss due to compression. Although selecting TIFF-16 leads to a larger file size, quality loss is minimized when modifying the file with other image editing software.



2 Select [Save Size] from the [Tool] menu, or click

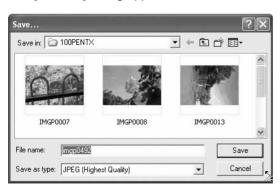
on the right of the

icon to select the save size.



Select [Save] from the [Tool] menu or click the [1] icon on the Tool bar.

The [Save as] dialog appears.



4 Specify the file name and save destination, and then click [Save].

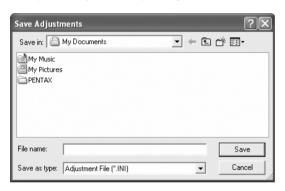
The image file is saved.

Saving Image File Adjustment

All current adjustment combination can be saved as a parameter file. Saved adjustment can then be applied to other RAW images for processing.

Click [Save Adjustments] from the [Tool] menu on the Main panel or click the [A] icon.

The [Save Adjustments] dialog appears.



Specify the file name and save destination, and then click [Save].

The current settings are saved as an adjustment setting file (*.INI).

Recalling Image File Adjustment

- 1 Display a RAW image file in the Preview panel.
- Click [Recall Adjustment] from the [Tool] menu on the Main panel or click the 🕼 icon.

The [Open Adjustment File] dialog appears.

Select a folder and parameter file name, and then click [Open].

The current RAW image is processed by the recalled adjustment.

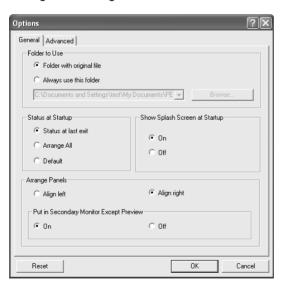
Changing the PENTAX PHOTO Laboratory 2.0 Settings

Select [Options] from the [Tool] menu on the Main panel or click the picon on the Tool bar.

The [Options] dialog appears.

Click the [General] tab.

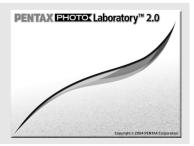
Change the settings as needed.



-	_
Item	Content
Folder to Use	Select from one of two folders to use. Folder with original file: The folder with RAW data is used. Always use this folder: Click [Browse] to display the [Browse for Folder] dialog, and then select the folder to use.
Status at Startup	Select the status at startup. Status at last exit: Maintains the settings last used when the application was closed. This switches to [Arrange All] when, for example, the settings last used cannot be restored due to a difference in the number or type of monitors. Arrange All: All panels to be used are arranged. Display size is set to Small (default setting), and other settings are displayed with the status at last exit. Default: The status for each panel is returned to the default status.
Show Splash Screen at Startup	Sets splash screen when PENTAX PHOTO Laboratory 2.0 starts. ON : Splash screen is shown. OFF : Splash screen is not shown.
Arrange Panels	Sets whether panels are aligned to the right or left when automatically arranging the panels.
Put in Secondary Monitor Except Preview	Set this to [ON] to arrange the White balance panel, Tone panel, and Other settings panel on the secondary monitor. In this case, the Arrange Panels option is ignored.



The splash screen is the title screen that appears when PENTAX PHOTO Laboratory 2.0 starts.



3

Click the [Advanced] tab.

Change the settings as needed.



Item		Content
Color Sp	oace	Select from [sRGB] or [AdobeRGB] for the color space that sets the color range. sRGB: This is currently the most common color space setting and is compatible with most monitors and image processing software. AdobeRGB: This offers a wider range of color than [sRGB]. Use this setting for tasks such as making detailed adjustments on images or commercial printing.
1/	Ihan viawina imaa	as processed with AdobaBCB in an aBCB anvironment



When viewing images processed with AdobeRGB in an sRGB environment, the saturation may appear lower than when processed with sRGB.

Processing	Select from starting processing jobs immediately or creating a queue list and starting jobs later. Start immediately: Jobs are started immediately. Other operations cannot be performed until processing is completed.
	Use queue list: Jobs are added to a queue list. Jobs may be added or deleted before processing or during processing.

Item	Content
Refresh Preview	Real time: Set this to apply processing conditions to the preview image upon each change made to [Custom Processing] settings. Refresh button: Set this to apply processing conditions to the preview image after all changes are made to [Custom Processing] settings, upon clicking the [Refresh] button.
Saving Multiple Files	Select the saving method when processing multiple images, from the following choices: [Save with Original file name + new extension], [Numbered files] and [Save one at a time]. Select Numbered files to specify the base file name and the number of following digits.



After setting each item, click [OK].

The options are set, and the dialog closes.

Click [Reset] to return all options to default settings.



When [Reset] is clicked, all tab settings including the settings of the currently open tab are returned to default settings.

Glossary

AdobeRGB

This color space is recommended for commercial printing and document creation by Adobe Systems (US). Its color reproduction range is larger than sRGB and adequately covers the color reproduction range for printing. Therefore, color data only reproducible on a printer are not lost when editing on a computer. Note that using AdobeRGB with unsupported software causes colors to appear faint.

CCD RAW data

CCD stands for Charge Coupled Device, a semiconductor device that converts optical information into electrical signals. RAW image data is raw data recorded from CCD output. This data can be transferred to a computer, and manipulated into image data with unique settings such as JPEG and TIFF using supplied software.

CSV format

This data format lists recording fields and separates them with a comma (,). Generally, character strings are indicated with double quotation marks in CSV format. Some software include data input and output functions in CSV format as part of a multipurpose format.

Exif-JPEG format

Exif stands for Exchangeable Image File Format. This image file format is based on the JPEG image data format, and allows thumbnail images and image properties to be embedded into the data. Software that does not support this format processes the image as a regular JPEG image.

Exif-TIFF format

Exif stands for Exchangeable Image File Format. This image file format is based on the TIFF image data format, and allows thumbnail images and image properties to be embedded into the data. Software that does not support this format processes the image as a regular TIFF image.

JPEG

An image compression format. Although the image quality deteriorates a little, images can be compressed to a smaller file size than with TIFF and other formats.

Lossless rotation

Because JPEG uses irreversible compression (data is lost during compression), the quality of JPEG images deteriorates when uncompressed, rotated and then saved. Lossless rotation, however, can be used to rotate JPEG images without recompressing the data. Exif and other data are maintained. Images for which lossless rotation is performed are processed as separate files; the rotated image appears after the image file is saved.

PNG format

Images saved using this format can be compressed to a small file size, but the reversible compression of this format makes the file size larger than JPEG. This format is for use with full-color images and prevents quality loss even when re-edited. PNG files, however, cannot be viewed on older browsers (Internet Explorer 3.0 or earlier or Internet Explorer 4.5 on Macintosh). In addition, thumbnail images and image properties cannot be embedded in the data.

sRGB (standard RGB)

An international color space standard defined by IEC (International Electrotechnical Commission). This is defined from color space for computer monitors and is also used as the standard color space for Exif.

TIFF-8

A file format for saving image data. Each image is recorded with 8-bit RGB data for each color. The image is not compressed making the file size large, but no deterioration of image quality occurs.

TIFF-16

Although TIFF images are usually 8-bit, this is a 16-bit TIFF. More computations are required when image processing as the dynamic range is larger.

Memo

Memo

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